DOCUMENT RESUME

ED 408 106 PS 025 552

AUTHOR Cillessen, Antonius H. N.
TITLE Sociometric Status, Social Self-Perceptions, and the Development of School Adjustment in Middle Childhood.
PUB DATE Apr 97
NOTE 21p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (62nd, Washington, DC, April 3-6, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Behavior Problems; Emotional Adjustment; Grade 4; Intermediate Grades; *Interpersonal Competence; Models; *Peer Acceptance; *Peer Relationship; *Self Concept; Social Development
IDENTIFIERS Externalization; Internalization; Mediating Factors; *Sociometric Status

ABSTRACT

An important and well-documented finding in the peer relations literature is that there is an association between children's peer relations and their later social development. Two models have been proposed for the predictive link between early peer relations and later adjustment: incidental and causal. Although findings have supported an independent (causal) contribution of negative early peer interactions to later behavior problems, relatively little is known about the actual mechanisms involved. This study tested whether children's social self-perceptions may function as a mediator of the relationship between early peer status and later outcomes. Participants were 660 fourth-grade students. Peer-, teacher-, and self-report measures were collected at three times during the school year at 12-week intervals. Results indicated that children's perceptions of their peer relations play a mediating role in the link between peer status and later outcomes. In particular, negative social self-perceptions play a determining role in the relationship between low peer status and later anxiety-withdrawal, low school competence, and loneliness. The mediating relationship was not found for aggressive and disruptive behaviors; in other words, self-perception was a mediator in internalizing, but not externalizing, problems. (EV)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 408 106

Sociometric Status, Social Self-Perceptions, and the Development of School Adjustment in Middle Childhood

Antonius H. N. Cillessen

University of Connecticut

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
Antonius H.N. Cillessen
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

In A. H. N. Cillessen & M. E. DeRosier (Chairs), Linking peer relations and adjustment: The role of interpersonal perceptions. Paper presented at the biennial meeting of the Society for Research in Child Development, 1997, Washington, DC (April).

PS 025552

An important and well-documented finding in the peer relations literature is that there is an association between children's peer relations and their later social adjustment. Researchers have focused especially on the link between problematic peer relations, in particular peer rejection, and later negative outcomes. In a large number of studies, the connection has been demonstrated between poor peer relations and later externalizing problems (such as aggressive, disruptive, or delinquent behaviors), later internalizing problems (such as loneliness or depression), and later academic or school adjustment problems (such as dropping out of school).

Beyond documenting the connection between peer relations and social development outcomes, researchers have considered how this connection should be conceptualized. Parker and Asher (1987) proposed two conceptual models for the predictive link between early peer relations and later adjustment. These two models are known as the incidental view and the causal view of the role of peer relations in development, differing primarily in the causal status that is ascribed to the role of peers in development.

According to the incidental view, peer interaction does not necessarily play a causal role in the determination of later adjustment outcomes. This model assumes instead that

there are stable dimensions of social adjustment across development. In this view, later problem behaviors are primarily seen as the continuation of previously existing problem behaviors. Peer rejection is merely a marker of these underlying problems, and is not necessarily expected to make a contribution to later adjustment outcomes.

According to the causal view, peer interaction plays multiple and necessary roles in development. The quality of a child's peer relations is expected to influence later social adjustment outcomes. In this view, peer rejection is expected to make an independent contribution to later negative outcomes, over and beyond the prediction by early problem behaviors.

From a theoretical perspective, the causal view is the most interesting, because of the assumption that peer relations are more than a reflection of other dimensions and make an independent contribution to later development. Empirically, data demonstrating this independent contribution of early peer interaction to later developmental outcomes has indeed emerged. For example, in a recent study, Coie and his colleagues found that childhood peer rejection was an independent predictor of internalizing and externalizing problems in adolescence, independent of the predictive effects of early aggression.

In spite of such findings, relatively little is known about the actual mechanisms involved in the influence of children's peer relations on developmental outcomes. Why, for example, would peer rejected status contribute to later developmental outcomes, independent of the predictive effects of problem behaviors, social-cognitive dysfunctions, or emotional deficiencies typical for this group?

One possible answer to this question is that the link between poor peer relations and later negative outcomes may be mediated by children's self-perceptions of their peer relations. Children with problematic peer relations, such as rejected children, have negative social experiences with others. As a consequence of these negative social experiences, they may develop a perception of themselves as not well-liked by others. These negative self-perceptions may then contribute to the development of further problems, such as internalizing problems and academic problems. Externalizing behaviors may result as well, when children who see themselves as disliked by others may find that aggression or disruptive behavior is the only way to attract attention from peers.

In contrast, children with adequate peer relations, such as popular children, do not have these same negative experiences. Their social self-perceptions will be more

positive, which may also make them less likely to develop further problems. Thus, the purpose of this paper is to test whether children's social self-perceptions may function as a mediator of the relationship between early peer status and later outcomes.

In order to test this question, data were collected as follows. Participants were 660 fourth-grade boys and girls, who formed the complete fourth-grade cohort in 10 elementary schools of one public school system. Peer-, teacher-, and self-report measures were collected at three times during the fourth grade school year: in the fall (Time 1), winter (Time 2), and spring (Time 3). The consecutive measurement times were separated by equal 12-week intervals.

The longitudinal nature of this data was used to test whether the link between early peer status and later outcomes might be mediated by children's perceptions of their own peer relations. Measures of peer status were derived from the assessment at Time 1 in the beginning of the school year. Measures of outcomes were derived from the assessment at Time 3 at the end of the school year. Measures of the possible mediatory social self-perceptions were derived from the assessment at Time 2 in the middle of the school year.

Sociometric status was measured at Time 1 using an unlimited nominations procedure in which children identified the peers in their grade whom they liked most and liked least. Social preference and social impact were computed in the usual way, and children were classified in the five sociometric status groups popular, rejected, neglected, controversial, and average.

Measures of children's perceptions of their peer relations were derived from the Time 2 assessment in two ways. First, children completed the CRS (Child Rating Scale), a self-report instrument in which children rate their own social and academic competence using a series of 5-point ratings. This instrument includes a reliable 6-item subscale which measures children's perceptions of their own peer relations. Examples of the items included in this scale are: "My classmates like me," "I have many friends," or "Other kids choose me last." Children's perceptions of their own peer relations were determined by computing the average rating across the items in this scale. (After reversing the negatively worded items.)

A second way to measure children's perceptions of their peer relations was included in a peer nominations instrument used at Time 2. Two peer nomination items were included in which children were asked to take the perspective of their

peers. In one item, children were asked to name the peers in their grade whom they thought liked them the most. In the other item, children named the peers in their grade whom they thought liked them the least. For each child, the number of peers named for both questions were counted, and then standardized within grade to control for grade size differences.

These three self-perception measures (the ratings and the two nominations) correlated significantly with one another. Children's ratings of how well-liked they were by their peers correlated positively with the number of peers they thought liked them the most (r = .20, p < .001), and correlated negatively with the number of peers they thought liked them the least (r = -.15, p < .001). Both peer nominations correlated positively with one another (r = .14, p < .002), reflecting individual differences in children's response tendencies in an unlimited nominations procedure.

At Time 3, indicators were available of four outcomes: externalizing problems, internalizing problems, academic problems, and loneliness. The first three measures were derived from teacher reports. Teachers of the participating children had completed a version of the TCRS (Teacher Child Rating Scale), which included subscales for the following three constructs: aggressive-disruptive behavior, anxiety-

withdrawal, and school competence. Assessment of the fourth outcome measure, children's loneliness, was derived from children's self reports using Asher and Wheeler's (1985) Loneliness and Social Dissatisfaction scale.

The first set of analyses illustrated the association between children's peer status at the beginning of the school year and the outcome measures assessed at the end of the school year. Analysis of variance was conducted in which the status groups identified at Time 1 were compared on each of the Time 3 outcome measures. A significant effect for sociometric status was found for each measure. For aggressive-disruptive behavior (Figure 1), rejected and controversial children had significantly higher scores than popular, average, and neglected children. For anxiety-withdrawal (Figure 2), the status effect reflected the fact that rejected children were significantly more anxious and withdrawn than popular children. For school competence (Figure 3), children who had been classified as rejected at Time 1 were significantly less competent than other children at the end of the school year. Children who had been rejected in the beginning of the school year also were significantly more lonely than other children at the end of the school year (Figure 4).

The next set of analyses was conducted to test whether the association between children's peer status at the beginning of the school year and outcomes at the end of the school year was mediated by children's perceptions of their peer relations. A test for mediation includes three variables: a predictor, an outcome, and a mediator. The first requirement is that all three variables are significantly correlated with one another. The test of mediation then involves comparing the variance explained in two regression analyses: one is which the outcome is explained by the predictor and the mediator combined, and one in which the outcome is explained by the predictor alone. If the amount of variance explained is significantly reduced when the mediator is eliminated, there is evidence for mediation.

Because the test of mediation is based on regression analysis, children's continuous social preference scores were used as the measure of peer status. We then tested whether the link between social preference and each of the outcome measures at Time 3 was mediated by children's self-perceptions.

First, we conducted these tests by using children's self-ratings at Time 2 as the mediator. The results of these analyses are shown in Figure 5. Figure 5 present

first the correlations between the predictor, mediator, and outcome, for each of the four outcomes. The required significant correlations were found for anxiety-withdrawal, school competence, and loneliness. Thus, mediation was tested for these three cases. Evidence for mediation was found in each case: children's perceptions of their peer relations at Time 2 significantly mediated the link between peer status at Time 1 and children's anxious-withdrawn behavior, school competence, and loneliness at Time 3.

For aggressive-disruptive behavior, the required pattern of correlations was not present, because the correlation of the outcome with the mediator was not significant. Thus, the test of mediation was not meaningful in this case.

Second, we tested for mediation using as the mediator children's nominations of the number of peers they thought liked them (Figure 6). The required pattern of correlations was found for loneliness. The test for mediation showed that the link between status at Time 1 and loneliness at Time 3 was significantly mediated by children's perceptions of the number of peers that liked them at Time 2.

An following pattern of findings emerged in the third set of analyses (Figure 7). Here we tested whether the link between peer status and the outcomes was mediated by

children's nominations of the number of peers they thought did not like them. The required significant correlations, however, were never present because social preference did not correlate significantly with the peer nomination measure. Thus, it was not meaningful to test mediation in any of the four cases. Note, however, that children's perceptions of the number of peers that did not like them at Time 2 correlated significantly with children's self-reported loneliness at Time 3.

In summary, the results from this study indicate that children's perceptions of their peer relations play a mediatory role in the link between peer status and later outcomes. In particular, the results show that negative social self-perceptions play a determining role in the relationship between low peer status and later anxiety-withdrawal, low school competence, and loneliness.

For anxiety-withdrawal and school competence, it is important to point out that the measures involved in the test of mediation were not only assessed at different times, but also derived from different sources of information: peer status derived from peer nominations, self-perceptions derived from self-reports, and outcome measures derived from teacher ratings. Thus, shared method variance does not play a role in explaining these results.

Mediation for loneliness was found for two of the three self-perception measures. Thus, the link between low social preference and later loneliness was clearly mediated by children's perceptions of themselves as not being well-liked by others. This finding emerged not only when children rated themselves low on peer sociability, but also when they named few others as peers whom they thought liked them.

The mediating relationship was not found for aggressive and disruptive behaviors. This result can be explained by the findings from previous research. Zakriski and Coie (1996) found that children who are likely to be aggressive generally are inaccurate perceivers of their own peer relations. Thus, the fact that perceptions of relationships were not an influential factor for these children is not surprising.

The mediating role of self-perceptions worked well for the prediction of internalizing problems, loneliness, and school problems, but not for the prediction of externalizing problems. The effect on school problems may be an indirect result of the increased levels of internalizing problems and loneliness children experienced. Whether this indirect pathway exists is a topic for future investigation.

One further comment regards the perceptions and experiences of rejected children. Researchers sometimes

have equated "peer rejection" with "the experience of being rejected." Consistent with this, it was assumed in this paper that rejected children as a group have more negative social experiences. But by showing that perceived status plays a mediatory role in the consequences of actual status, our paper also suggests that these terms refer to different constructs. Actual status is more or less objective to the child in the sense that it is determined by her or his peers. Perceived status is a subjective judgment of the child herself or himself. In this paper, three ways were suggested to measure perceived status by using simple ratings or reversed peer nominations. The development of more elaborate interview measures to assess children's personal experiences of rejection or popularity is an important task for future research.

Finally, the fact that self-perceptions were found to mediate the influence of peer status on later outcomes may be used constructively. A corollary of this finding is that positive self-perceptions may have a buffering effect against the occurrence of later negative outcomes. Thus, intervention efforts may focus on children's perceptions of their own peer relations as factors involved in the prevention of negative outcomes, in particular internalizing problems and children's loneliness.

Figure 1

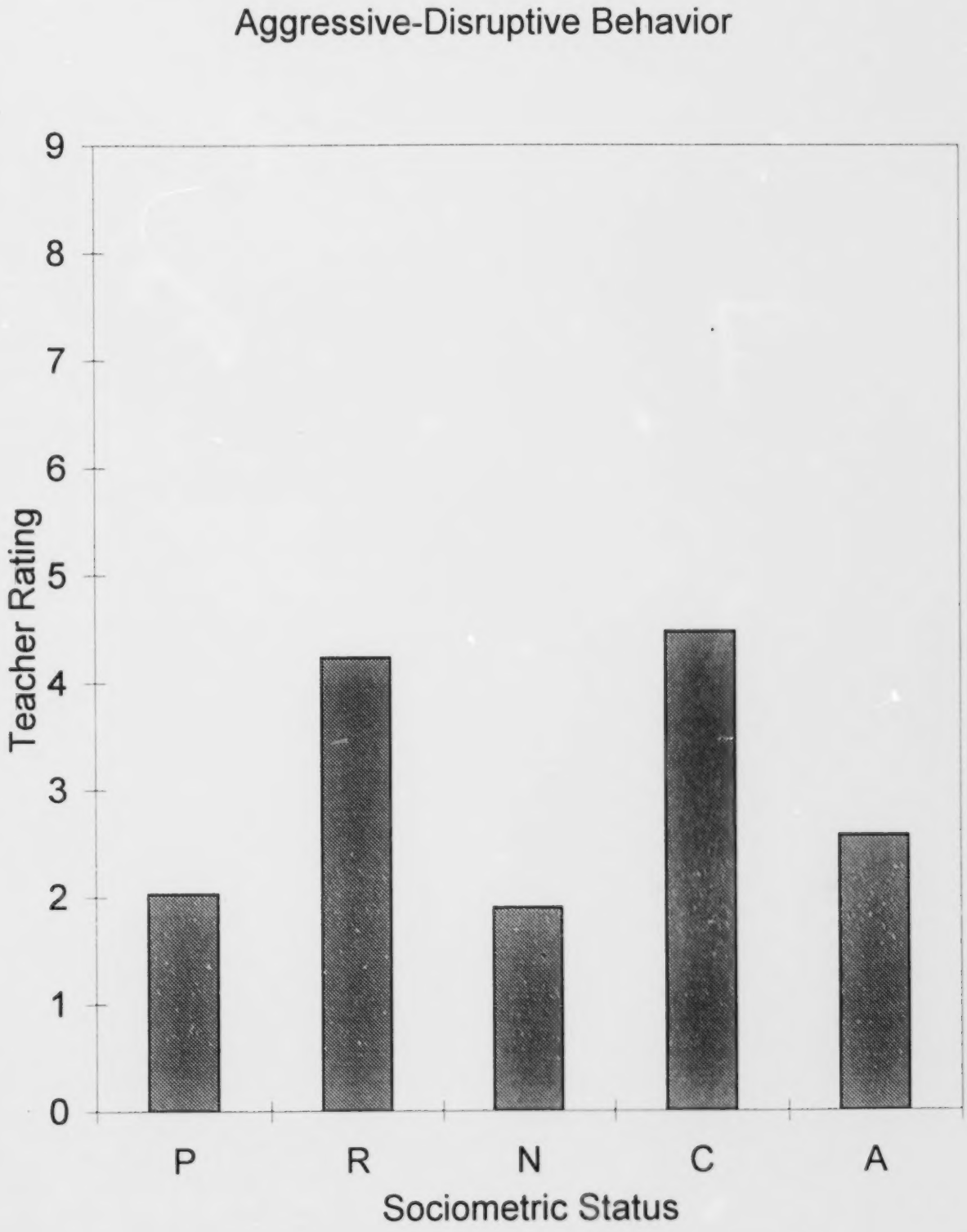
Aggressive-Disruptive Behavior
Teacher Rating
9
8
7
6
5
4
3
2
1
0
P
R
N
C
A
Sociometric Status

Figure 2

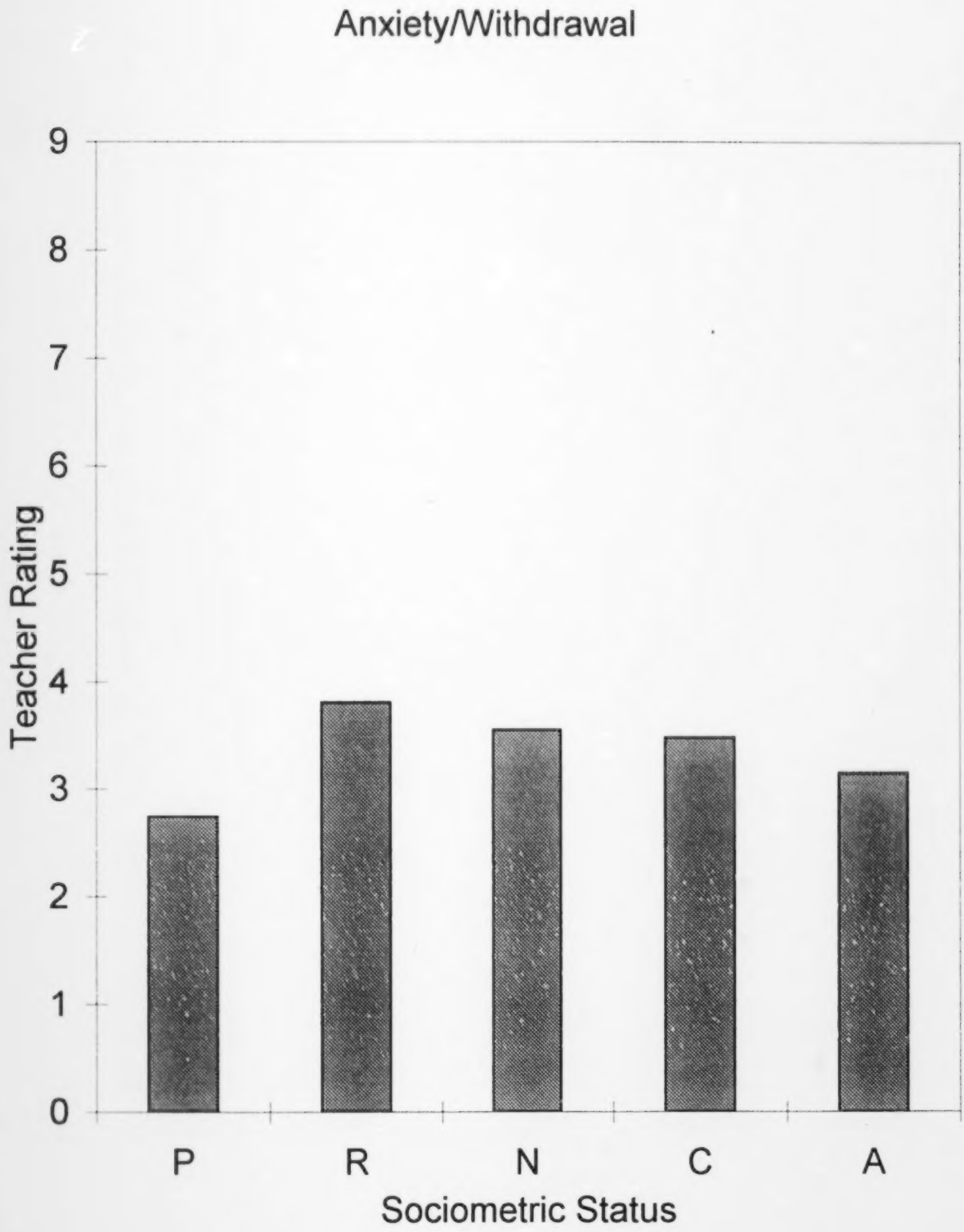
Anxiety/Withdrawal
Teacher Rating
9
8
7
6
5
4
3
2
1
0
P
R
N
C
A
Sociometric Status

Figure 3

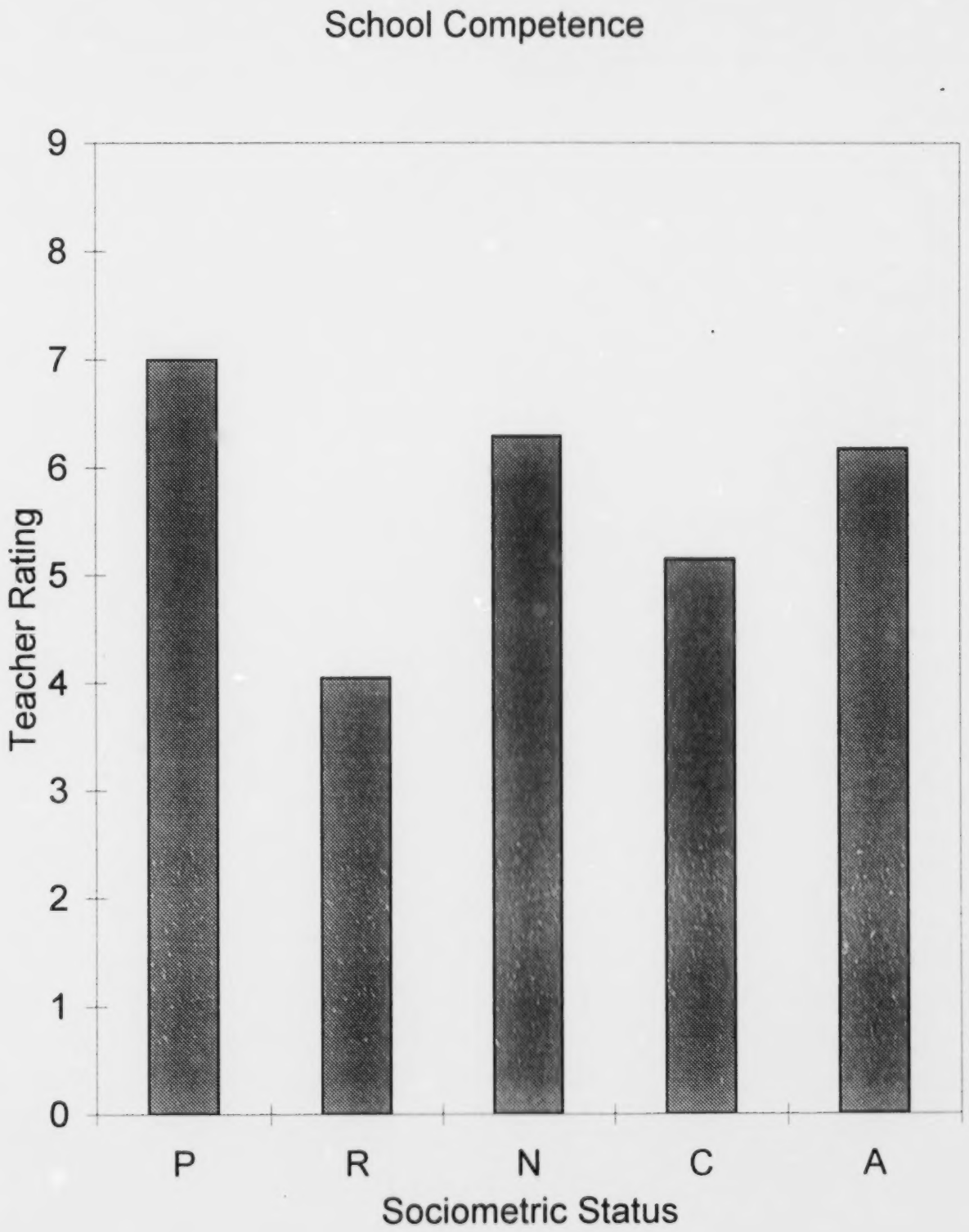
School Competence
Teacher Rating
9
8
7
6
5
4
3
2
1
0
P
R
N
C
A
Sociometric Status

Figure 4

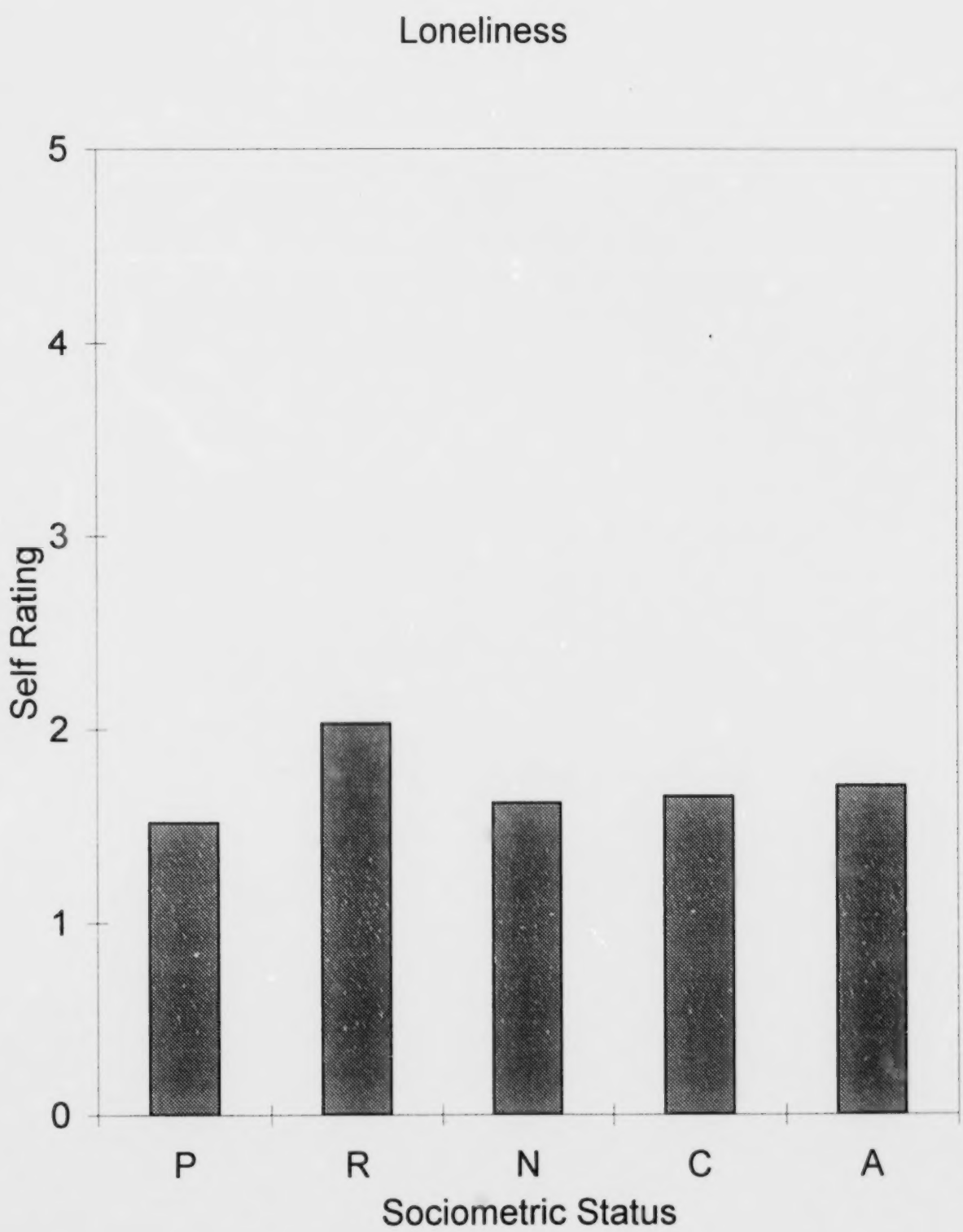

Figure 5
Mediation by Self Ratings of Liking

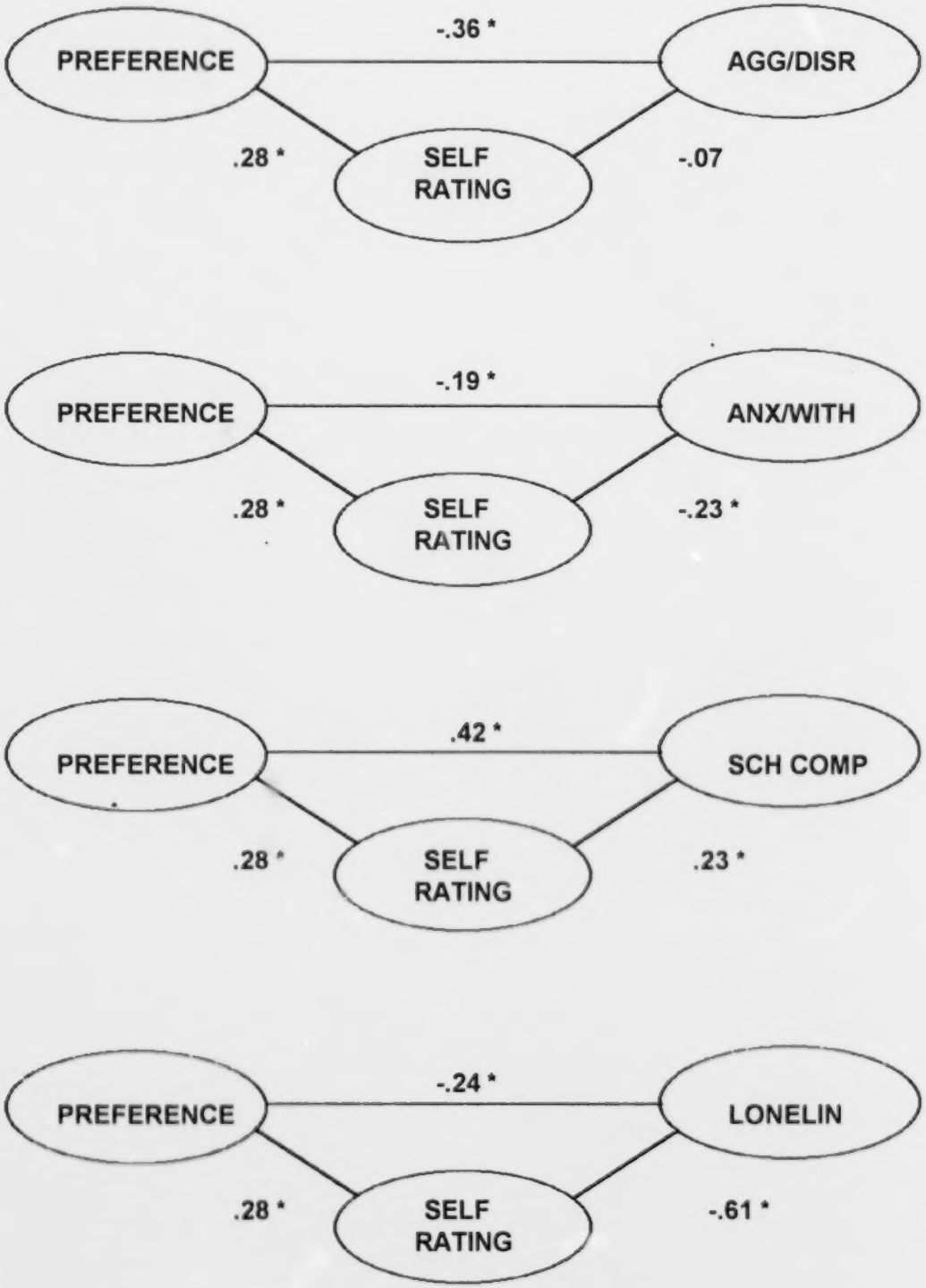

Figure 6
Mediation by "Like You Most" Nominations

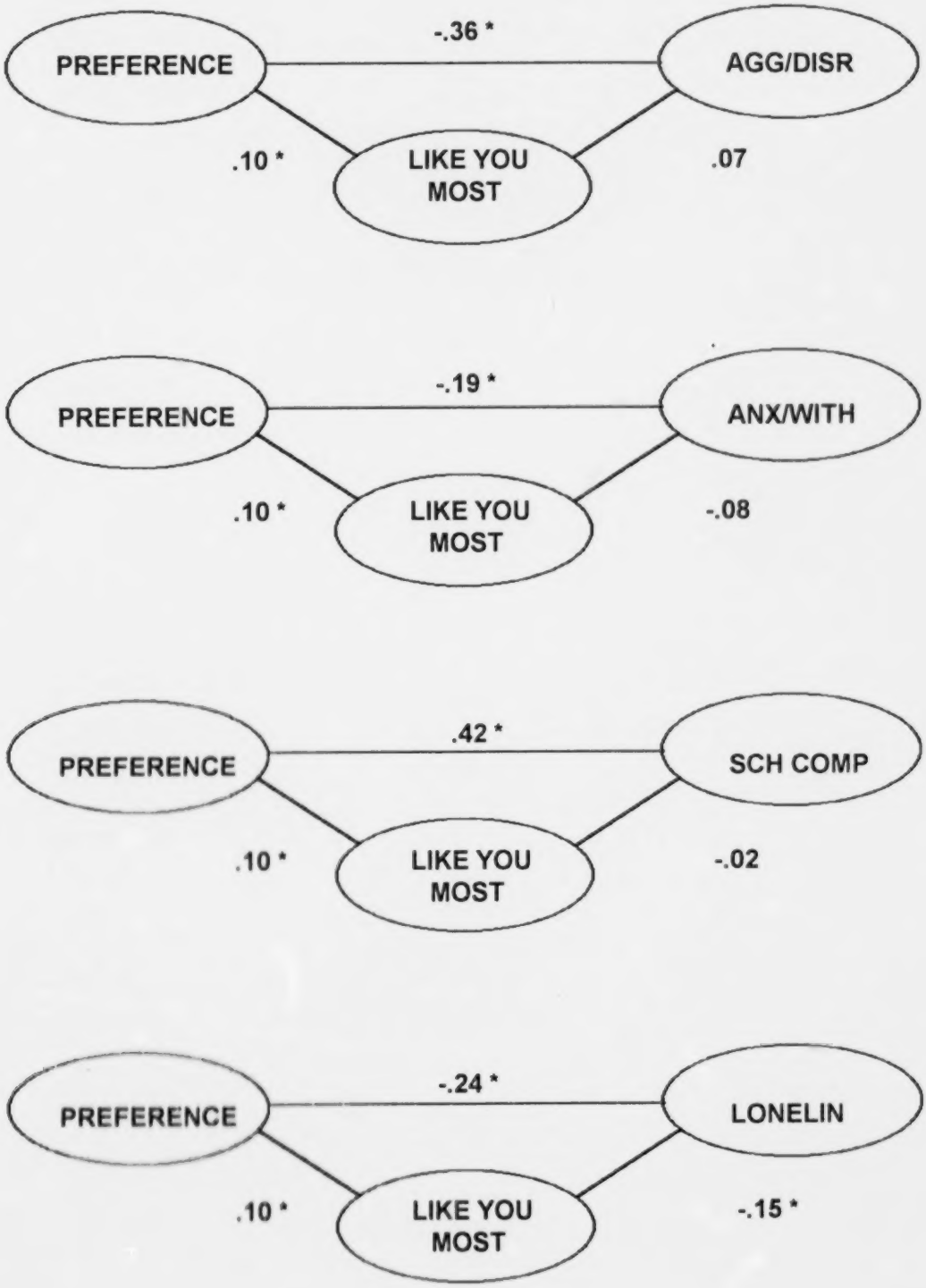

Figure 7
Mediation by "Like You Least" Nominations